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Docket No. 520,43302X00
Serial No. 10/722,531
Office Action dated July 31, 2006

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1-3. (Cancelled).

4. (Previously Presented) An inspection apparatus, comprising:
- an illumination optical system which illuminates light to an object under inspection;
 - a detection optical system which detects light reflected from said object and converts the detected light into an image signal;
 - a spatial filter which is provided in said detection optical system to selectively shield diffracted light pattern coming from a circuit pattern existing on the object by combining light-shielding points of minute dots state;
 - an arithmetic processing system which processes the image signal detected by said detection optical system;
 - a monitor which observes foreign matters/defects based on a signal processed by said arithmetic processing system;
 - a cartridge equipped with a plurality of substrates for forming said spatial filter;
 - a cleaner which cleans said substrates of said cartridge; and
 - a printer which prints the Fourier transformed image of the circuit pattern under inspection of the object onto the substrates of said cartridge.

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5. (Previously Presented) The inspection apparatus according to claim 4, wherein said detection optical system comprises a Fourier transform lens which Fourier transforms the diffracted light reflected from the circuit pattern of said object, and an inverse Fourier transform lens which inverse Fourier transforms light obtained through said spatial filter.

6 - 7. (Cancelled).

8. (Currently Amended) ~~The An~~ Inspection apparatus according to claim 7, further comprising:

a stage which mounts an object under inspection and moves said object in a three-dimensional direction;

an illumination optical system which illuminates light to said object;

a detection optical system which detects light reflected from said object and converts the detected light into an image signal, said detection optical system comprising:

a Fourier transform lens which Fourier transforms diffracted light coming from said circuit pattern of said object, and

an inverse Fourier transform lens which inverse Fourier transforms light coming through said spatial filter;

a spatial filter which is provided in said detection optical system and prints so as to shield a Fourier transformed image generated from a circuit patter existing on the object;

an arithmetic processing system which processes the image signal detected by said detection optical system;

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a monitor which observes foreign matters/defects based on a signal
processed by said arithmetic processing system;

a cartridge equipped with a plurality of substrates for forming said spatial filter;
a cleaner which cleans said substrates of said cartridge; and
a printer which prints the Fourier transformed image onto the substrates of
said cartridge.

9. (Currently Amended) The inspection apparatus according to claim 7~~8~~,
wherein, if said circuit patterns existed on the object are included a plurality of
different kind circuit patterns, spatial filter appropriate for each kind circuit pattern
and spatial filter appropriate for a combination of some of said kind circuit patterns
are provided so as to inspect a foreign matter/defect on the plurality of the different
kind circuit patterns.

10. (Original) The inspection apparatus according to claim 4, wherein said
printer is a dot printer, wherein $D \leq P$ where D is dot size and P is print pitch, and
wherein interpolation is provided for gap between dots.

11. (Original) The inspection apparatus according to claim 8, wherein said
printer is a dot printer, wherein $D \leq P$ where D is dot size and P is print pitch, and
wherein interpolation is provided for gap between dots.

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12. (Original) The inspection apparatus according to claim 10, wherein $D \leq 1/50 \times \phi$ if a diameter of Fourier transform plane within a circuit pattern of said object is ϕ .

13. (Original) The inspection apparatus according to claim 11, wherein $D \leq 1/50 \times \phi$ if a diameter of Fourier transform plane within a circuit pattern of said object is ϕ .

14. (Cancelled).

15 - 17. (Cancelled).